United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

MINDFULNESS-BASED COGNITIVE THERAPY AS A COMPLEMENTARY TREATMENT FOR COMBAT/OPERATIONAL STRESS AND COMBAT POST-TRAUMATIC STRESS DISORDER

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTERS OF MILITARY STUDY

MAJOR G. W. DICKEY, JR, USMC

AY 07-08

Mentor and Oral Defense Committee Member: [signature]
Approved: ✓
Date: 18 April 2008

Oral Defense Committee Member: [signature]
Approved: —
Date: 18 April 2008

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
2007		**00-00-2007 to 00-00-2007**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Mindfullness-Based Cognitive Threapy as a Complementary Treatment for Combat/Operational Stress and Combat Post-Traumatic Stress Disorder	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **United States Marine Corps, Command and Staff College,Marine Corps University 2076 South Street,Marine Corps Combat Development Command,Quantico,VA,22134-5068**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**35**	

Executive Summary

Title: Mindfulness-Based Cognitive Therapy as a complementary treatment for Combat/Operational Stress Reactions and Combat Post-Traumatic Stress Disorder

Author: Major G. W. Dickey, Jr, United States Marine Corps

Thesis: Mindfulness-Based Cognitive Therapy is a viable complementary treatment to the traditional psychotherapeutic and pharmacological methods used to treat Combat/Operational Stress Reactions and Combat Post-Traumatic Stress Disorder.

Discussion: This paper is presented with the understanding that while current combat stress and combat post-traumatic stress disorder (CPTSD) treatments are being effective more can always be done. If a Marine's mind is his greatest weapon, research that helps the Marine's mind work better should be unceasing. The joint publication of a 2007 letter in the Marine Corps Gazette this past year discussing the need to reform the Marine Corps Combat-Operational Stress Control program demonstrates the importance of research that will help Marines in the area of psychological treatments. Appendix A shows the current Marine Corps-Navy model (also currently being adapted for the Canadian military) for how to view treatment of combat stress. Treatment is required "right of the boom" but this paper intends to demonstrate that there are ways to assist Marines "left of the boom" as well.
Since the wars in Iraq and Afghanistan do not seem to be ending any time soon incidence of combat-operational stress reactions (COSRs) and combat post-traumatic stress disorder (CPTSD) will continue to rise amongst those that serve in the armed forces. This paper will review some of the more prominently used pharmacological and psychotherapeutic techniques and suggest a complementary therapy that will not only assist in the treatment of COSR and CPTSD but offers possibilities for pre-combat inoculation as well as assisting with stress management during the course of non-combat garrison duties. This complementary treatment is called Mindfulness Based Cognitive Therapy (MBCT).

Conclusion: The role of mindfulness in the treatment of psychological trauma is noteworthy. Mindfulness cultivation fosters the development of an internal locus of control, it encourages association as opposed to dissociation, and promotes opening up the field of awareness as opposed to restricting it. Depressive patients treated with MBCT report having the experience of self as competent, the experience of the body as effective as opposed to defective, and develop a sense of self that is whole and integrated. The role that MBCT plays in reducing patients' inability to adaptively manage or tolerate intense emotion is an indispensable part of what makes this treatment such an attractive treatment for COSR and CPTSD sufferers, specifically related to depression and suicidal ideations. When a Marine can be taught to recognize the thought processes that lead to such things as overwhelming anger, sadness, anxiety, risk-taking or addictive behaviors he then gets to make a choice.

DISCLAIMER

Table of Contents

Preface

My undergraduate degree is in Behavioral Medicine and the study of the mind and human behavior has fascinated me from the first book I opened on the subject. During the twenty-one years I've spent in the Marine Corps I've seen a lot of mental suffering both from the effects of combat and from young Marines simply not knowing why they do the things they do or how to control themselves. Suffering in combat comes from not understanding what the trauma means or not knowing how to process it. Suffering in day-to-day life comes from the all-too-human malady of a disordered, ill-disciplined mind coupled with strong emotional reactions. This paper is written with the hope that my fellow Marines might achieve peace of mind that allows freedom and clarity in their lives and the strength to face adversity with the steady, resolute calm expected of legendary warriors.

"We must shift the current direction of combat/operational stress control efforts to a more holistic, nested, enabling strategy that provides a sound, unified approach. It should mirror our warrior culture, with its distinctive ethos emphasizing strength over weakness, wellness over illness, and prevention over treatment." [1]

J. N. Mattis, CG IMEF
K. J. Stalder, CG II MEF
R. C. Zilmer, CG III MEF

Introduction

This paper is presented with the understanding that while current combat stress and combat post-traumatic stress disorder (CPTSD) treatments are effective more can always be done. If a Marine's mind is his greatest weapon, research that helps the Marine's mind work better should be unceasing. The joint publication of a 2007 letter in the Marine Corps Gazette this past year discussing the need to reform the Marine Corps Combat-Operational Stress Control program demonstrates the importance of research that will help Marines in the area of psychological treatments. Appendix A shows the current Marine Corps-Navy model (also currently being adapted for the Canadian military) for how to view treatment of combat stress. Treatment is required "right of the boom" but this paper intends to demonstrate that there are ways to assist Marines "left of the boom" as well.

Since the wars in Iraq and Afghanistan do not seem to be ending any time soon incidence of combat-operational stress reactions (COSRs)[2] and combat post-traumatic stress disorder (CPTSD) will continue to rise amongst those that serve in the armed forces. This paper will review some of the more prominently used pharmacological and psychotherapeutic techniques and suggest a complementary therapy that will not only assist in the treatment of COSR and CPTSD but offers possibilities for pre-combat inoculation as well as assisting with stress management during the course of non-combat garrison duties. This complementary treatment is called Mindfulness Based Cognitive Therapy (MBCT)[3].

Before going much further it's appropriate to provide some definitions to assist the reader with understanding how MBCT could be helpful for the alleviation of symptoms related to these problems.

Definitions and Current Forms of Treatment

Definitions

The following paragraphs provide definitions for stress, combat-operational stress reaction and combat post-traumatic stress disorder to provide clarity for the reader.

Stress is the body's reaction to a change that requires a physical, mental or emotional adjustment or response. This adjustment or response is referred to as an *adaptation*. An adaptation may be positive (eustress) or negative (distress). Both can be equally taxing on the body. A *stressor* causes the body or mind to have to adapt. Although practically all stressors result in a physical response within the body there are generally two accepted ways that stressors may affect an organism: emotionally and physically. Appendix B provides a model for how an organism experiences stress and adapts to handle the stressor.[4]

Combat-Operational Stress Reaction (COSR) results from the experience of stress related to combat or non-combat military activities. While the effects on the body and mind are similar to the stress one may feel sitting in traffic on the way to work or from not doing well on a test in college; the stressors are far more intense, prolonged, and in many cases, inescapable. COSRs are not only experienced by front line combat troops. They can, for example, be experienced by mortuary affairs Marines handling remains for extended periods of time or by members of a logistics section that is short-handed and working long hours. A physical COSR could be exhaustion caused by going for long periods without sufficient sleep due to prolonged hostile fire or constant patrolling through hostile areas. A psychological COSR could be the result of an emotional reaction caused by prolonged hostile fire or the fear and feelings of uncertainty caused by having to patrol through known enemy territory. In both cases the stressor is the same but the effects can be both psychological and physical.

Examples of symptoms of psychological COSRs are extreme anxiety, depression, misplaced anger, despair, and inability to concentrate. Physical symptoms may include loss of appetite, sleeplessness, unexpected fatigue, and energy loss. While this list of symptoms is by no means complete it gives an idea of the breadth of issues that may arise from combat-operational stress reactions.

Combat posttraumatic stress disorder (CPTSD) is a combat-related traumatic stress injury that fails to heal. The symptoms and behaviors it causes remain significantly troubling or disabling up to or beyond 30 days after their onset. The symptoms of CPTSD are similar to COSRs except they persist for longer periods of time, may be more intense, or may seem to disappear and then reappear with more intensity weeks and months later. Depression and suicidal ideations are the predominant symptoms that CPTSD sufferers deal with the longest.

Combat isn't the only cause of PTSD. Any traumatic event such as rape, experiencing a natural catastrophe, or suffering severe physical and psychological abuse throughout childhood can all result in PTSD. The official criteria out of the Diagnostic and Statistical Manual (DSM) of Mental Disorders defines PTSD by five criteria. These are shown in Appendix C. Criteria A from the DSM-IV criteria list mentioned above is what makes combat-related PTSD different from non-combat related PTSD.[5] CPTSD is not the only stress disorder that can result from unhealed stress injuries; others include clinical depression and anxiety, and substance abuse or dependence. CPTSD persists due to dysfunctional thought-control strategies.

Current treatments fall into three main categories: treatment immediately following trauma, pharmacological treatment, and psychological treatment. These may be used alone or they may be used in combination. Generally the sooner the treatment the better the chance of success.

Immediately Following the Trauma

A post trauma debrief is a way for unit leadership or mental health professionals to get an idea of the extent of a trauma's affect on those exposed. Different names are often used to

describe this type of debrief. To avoid confusion, Critical Incident Stress Debrief (CISD)[6] will be used in this paper. The CISD is more useful as an investigative tool than it is a therapeutic process because it provides an initial way for someone who has recently suffered a combat-related traumatic incident to discuss what happened. It allows mental health professionals to get an estimate of how the patient who suffered the trauma is dealing with it and, whether or not, that person requires additional treatment. The CISD may be conducted as a standalone event or part of an operational debrief following a patrol or operation. Debriefers may be mental health professionals or members of the chain of command who have been trained in what to look for.

If during the CISD it is determined the patient is significantly suffering from the traumatic event then some immediate steps can be taken. The acronym PIES describes how initial assistance can be provided to someone suffering from a traumatic event. PIES stands for Proximity, Immediacy, Expectancy, and Simplicity[7]. Let's use a Marine that fought in the battle of Fallujah as an example. Proximity means the Marine would be treated close to the front near his parent unit and not be removed back to a rear area somewhere. Immediacy means treatment would begin soon after symptom onset. The immediacy would depend on the type and severity of symptoms. Expectancy means the mental health professional conducting the treatment would continue to reassure the Marine that he is not ill and that what he is experiencing is normal and that he will probably return to duty within a short time. Simplicity means the Marine would be provided food, drink, warmth, and rest in an effort to bring body temperature and level of arousal to a normalized state.

Pharmacological Treatments for COSRs and CPTSD

Once it's determined that a service member is suffering from symptoms related to traumatic stress pharmacological assistance may be required. There are numerous types of drugs which can be used to assist a person suffering from COSRs and CPTSD. While all the drugs that I'll mention are beneficial to some degree many of them have undesirable side effects

and only treat specific symptoms. The primary reason a mental health professional uses pharmaceuticals is to assist a patient to decrease physiologic arousal levels in order to reduce suffering and allow other types of therapies to be introduced.

The most popular and commonly used drugs are the selective serotonin reuptake inhibitors (SSRI)[8]. SSRI are a class of antidepressants that inhibits the reuptake of the neurotransmitter serotonin. Serotonin is a neurotransmitter that is known to inhibit components of the conditioned fear response. The less serotonin a patient has, the less control he has over his fear response. SSRIs attempt to help the patient's brain better use available serotonin which in turn assists the patient in controlling their fear response.

SSRIs also prevent further damage to important parts of the brain called the hippocampi. The hippocampi are two structures within the human brain that control behavior, memory, and spatial navigation. By protecting the hippocampi one can prevent or reduce reexperiencing (the traumatic event), hyperarousal, emotional numbing/avoidance, irritability, angry outbursts, frustration, and intolerance. Sleep improves and nightmares decrease. Panic symptoms and exaggerated startle responses also improve or resolve completely.

The advantages of SSRIs are that they may be taken for extended periods with no toxicity concerns, they don't interfere with cognitive or motor function and most military patients may stay on full active duty when taking them. One of the drug's major disadvantages is the length of time it takes to be effective. SSRIs may take 3-6 weeks to be effective and during this time the patient may actually feel worse. This, in turn, can reduce patient's willingness to stay on the medication. Decreased sexual function is another possible side-effect. For young, healthy service members this may also compromise willingness to continue taking the drug.

Antipsychotics[9] are another class of drugs that have been helpful in dealing with symptoms of posttraumatic stress. Generally these drugs are not used alone but are used in conjunction with SSRIs. Some side effects for this class of drugs are weight gain and sedation. Because of these use by military personnel is generally not recommended.

Another class of drugs is Antidrenergic Antihypertensives[10]. These are also known as "alpha blockers" and "beta blockers" because they help patients regulate physiological arousal by blocking alpha or beta receptors within the central nervous system. This class of drugs regulates the absorption of norepinephrine and epinephrine...two chemicals within the body that regulate the central nervous system and subsequently an organism's physiological level of arousal. This class of drugs was originally used to treat high blood pressure but helps combat stress sufferers by relieving hyperarousal, exaggerated startle responses, intrusive memories, and angry outbursts.

One major advantage of alpha and beta blockers is that they may prevent the development of CPTSD if taken during the initial days following the trauma. Other advantages include reductions in trauma-related nightmares, sleep disturbances, physiologic arousal, emotional numbing and avoidance, as well as the promotion of restorative sleep. Since they were originally designed to lower blood pressure it takes time to adapt to them: too high of a dose too quickly could result in lowered blood pressure resulting in fatigue and dizziness. This is a primary disadvantage of these drugs.

Anticonvulsants/Mood stabilizers[11] are the next class of drugs that are being studied for use in treatment COSRs and CPTSD. The original intent of this class of drugs was to help prevent seizures. Although the ways this class of drug works within the brain are not fully understood, there is evidence they have a protective affect on the brain and may help prevent symptoms of traumatic stress. More research is required to solidify that connection. Currently it is known that this class of drugs can help decrease nightmares, as well as decrease symptoms of hyperarousal, inappropriate anger, and irritability. A significant disadvantage of this class of drugs is the blood levels of those taking them have to be monitored closely due to a threat of toxicity.

Hypnotic and sedative medications[12] are the final class of drugs to be considered. These decrease anxiety and agitation, primarily assisting COSR and CPTSD sufferers by

allowing longer and more restorative sleep. Getting good sleep is a major factor in recovery from combat-related stress.

Psychotherapeutic Treatments for COSRs and CPTSD

The next few paragraphs will briefly discuss Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, Exposure therapy, Virtual Reality Exposure Therapy, Somatic Therapy (relaxation training and biofeedback), Exposure-based (flooding), and Attentional Training (meditation).[13] All of these therapies are intended to decrease psychological and physical arousal resulting from the effects of posttraumatic stress. They all have different ways of accomplishing this and all have varying degrees of success. Success of a particular method of treatment primarily relies on two things: competency of the therapist and the patient's willingness to participate in the therapy.

Cognitive Behavioral Therapy (CBT) is what most people think about when they think about psychotherapy. It consists of the therapist engaging in a reflective dialog with a combat or posttraumatic stress sufferer. During the dialogue the therapist helps the patient identify dysfunctional thinking patterns that may be causing symptoms related to posttraumatic stress. Once these thinking patterns are identified, the therapist can coach the patient to find more rational ways to think that may alleviate COSR and CPTSD symptoms.

Dialectical Behavior Therapy (DBT) was originally conceived in order to treat borderline personality disorder (BPD). Generally BPD develops in childhood but when combined with combat-related PTSD it becomes complex PTSD. DBT is a traditional reflective cognitive therapy combined with more experientially based stress management, affect regulation, and distress tolerance. DBT has been used clinically with CPTSD but its success has been limited only to case reports and has not been subjected to full case studies.

Exposure Therapy is a process in which memories are reimagined with a therapist and extinction training is practiced in order to extinguish or positively alter the arousal response to the traumatic memory. The treatment is generally effective. However it does not work in all

cases because many posttraumatic stress sufferers do not want to re-experience traumatic memories. They either refuse to discuss the traumatic event or actually are unable to consciously engage themselves in the remembrance of the traumatic memory. Pharmaceuticals are frequently used to assist the patient in maintaining low levels of arousal while reimagining the traumatic event.

Virtual Reality Exposure Therapy is essentially the same thing as Exposure Therapy except the posttraumatic stress sufferer experiences a computer generated reality reminiscent of the traumatic event. This helps patients that either cannot or are not willing to remember the traumatic event that has caused their suffering. Yearly increases in computer processor power are closing the gap between virtual and actual reality which are enabling more immersive experiences.[14]

Sympathetic arousal is the state in which the body is excited. Parasympathetic is the state in which the body is attempting to calm itself. Both of these could be considered the two sides of the "fight or flight" reaction. Sympathetic has an organism at full alert, ready to fight or run. Parasympathetic has an organism at a state of relaxation. **Somatic Therapy** is a process by which the patient is taught to reduce sympathetic arousal and induce parasympathetic recuperation. There are various techniques that can be used to teach a patient to reduce sympathetic arousal such as guided visualization, biofeedback, and progressive muscle relaxation.

Exposure-Based Therapy helps patients "decrease their fear response to internal and external cues that otherwise cause symptom intensification"[15]. One example of Exposure-based therapy is called "flooding". Flooding exposes the patient to as much stimulation as possible. The patient attempts to maintain attention on the stimulation for as long as possible until the stimulation is no longer arousing. This extinguishes the source of stimulation as a source of arousal. A source of arousal could be the sound of machine-gun fire or the exposure

by the patient to certain sights and sounds. Results have been marginal with Exposure-based therapy but it is still used and research is ongoing.

Attentional Training, meditation being one of the most common forms, teaches a patient to consciously redirect their awareness from intrusive thoughts or memories to something else that is happening at the current moment. A patient focusing his awareness on deep breathing or on the tactile sensation of two fingers touching each other are examples of awareness redirection. The idea behind this technique is that if the patient is able to focus on what is happening to him at the specific moment in which he is alive instead of focusing on past memories, parasympathetic processes are emphasized and sympathetic arousal minimized because the patient consciously recognizes there is actually nothing to be aroused by.

Another way to look at this is as a "signal to noise" ratio. A patient can overcome cognitive "noise" (intrusive thoughts) by focusing on the "signals" (breathing) their body is currently experiencing. This redirection of awareness is known as mindfulness and has been helpful assisting patients significantly reduce sympathetic arousal with PTSD related to rape trauma. More specifically, mindfulness has been successful in teaching patients to redirect dysfunctional thoughts that lead to symptoms resulting in depression[16] and suicidal behavior[17] as a result of posttraumatic stress. This is the realm in which Mindfulness-Based Cognitive Therapy resides.

Moving Into Mindfulness

Origin of Mindfulness

Mindfulness in the context of this paper draws from one of Theravada Buddhism's central tenets, mindfulness meditation. Reference to Buddhism in this paper will focus not on spiritual practice, but rather on Buddhism as a framework for the study of psychology. Still, because of the reference to Buddhism, many refer to the use of mindfulness for COSR/CPSTD treatment as an "alternative therapy". The author contends if it works, alternative therapy or not, it should be investigated to help our Marines.

The study of why the human mind does what it does and why humans think the way we do didn't start with Western psychology of the mid 1900s. It began two millennia before that with some of the earliest Buddhist writings. Dr. Albert Ellis, considered the "grandfather of cognitive-behavioral therapy" (CBT), has written:

> "Many of the principles incorporated in the theory of rational-emotive psychotherapy are not new; some of them, in fact, were originally stated several thousands of years ago, especially by the Greek and Roman Stoic philosophers (such as Epictetus and Marcus Aurelius) and by some of the ancient Taoist and Buddhist thinkers."[18]

In 1900, Indologist Caroline A. F. Rhys Davids, a well known British scholar, published a translation of the first book of the *Theravada Abhidhamma* (Buddhist scriptures), the *Dhamma Sangani*, and entitled the translation, "Buddhist Manual of Psychological Ethics". In the introduction to this seminal work, Rhys Davids writes:

"[T]he Buddhists were, in a way, more advanced in the psychology of their ethics than Aristotle — in a way, that is, which would now be called scientific. Rejecting the assumption of a psyche and of its higher manifestations ..., they were content to resolve the consciousness of the Ethical Man, *as they found it* (italics in the original text), into a complex continuum of subjective phenomena.... The distinguishable groups of dhammā — of states or mental psychoses — 'arise' in every case in consciousness, in obedience to certain laws of causation, physical and moral — that is, ultimately, as the outcome of antecedent states of consciousness.... [S]o Buddhism, from a quite early stage of its development, set itself to analyze and classify mental processes with remarkable insight and sagacity...."[19]

The recognition that Buddhism has relevance to the practice and study of psychology in the west today is growing. Since 1987 notable psychologists, psychiatrists, and neurologists have met with the Dalai Lama, the head of Tibetan Buddhism, as well as other Buddhist leaders and scholars, to discuss the Buddhist psychological framework and how it relates to current

Western thoughts on psychology, neurology, and living. October 2007, at Emory University, marked the twentieth year of the Mind and Life Dialogues as they are called. Appendix D shows a representative sample of speakers and panelists that typically attend this event. The topic for 2007 was "Investigating the Mind: Mindfulness, Compassion, and the Treatment of Depression".[20]

Explanation of Mindfulness

Before delving into the therapeutic technique of Mindfulness-Based Cognitive Therapy a more detailed look at the concept of mindfulness is in order.

If you have ever experienced driving to work yet not remembering the journey along the way you have experienced "mindlessness", the opposite of mindfulness. Mindlessness, "without mind", is a common phenomenon in the harried American culture of 2008 and generally leads many of us to wander around trapped in a mental simulation of the real world instead of experiencing reality as it's happening. Mindfulness, on the other hand, is intentional, moment-to-moment awareness.

> "An emphasis is placed on attending to any and all thoughts, feelings, sensations, and experiences in the field of consciousness without judgment or interpretation. One of the central purposes of mindfulness meditation practices, both in their original religious/spiritual context and their modern interpretation in behavioral medicine, is to become a detached observer of one's own mental activity, so that one thereby may identify its habits and distortions."[21]

It should be pointed out that in this case detached is not synonymous with dissociation, which is a symptom of CPTSD. In layman's terms mindfulness embodies the understanding that the human mind is an amazingly disordered instrument that gets distracted, obsessed, and generally derailed by what it **thinks** is happening in the world, based on a lifetime of psychological filters, conditioning, and habits of prediction; instead of being present to what is actually happening in the real world. Mindfulness forces the mind to focus on the experience of

a single moment. Instead of obsessing about what happened last week or last month, the mind is forced to focus on breathing or walking, right now, in this very moment. Instead of worrying about what might happen tomorrow or next year, the mind focuses on the spoonful of soup that has just been placed in the mouth or the words being spoken by the person with whom one is eating.

In terms more relevant to the Marine Corps' experience, the practice of mindfulness can mean the difference between a state of calm and the experience of frenzied panic when taking indirect fire. If the mind becomes obsessed by the "prediction" of being hit by the next enemy mortar round (even though it has no idea whether it will get hit or not), or is distracted by being horrified by the remembrance of the Marine that got hit yesterday (even though yesterday doesn't exist anymore and is not a predictor of the future), it isn't present to the moment in which it's living and can become subject to panic and inappropriate paralyzing fear. However, if the mind is focused on the moment in which it's living, the moment in which it **hasn't been hit** by mortar fire yet (and may never be), then, in reality, there is nothing to be worried about and calm results.

This may sound unusual since most of us are regularly and unconsciously wrapped up in contemplating (or worrying about) the future and giving a lot of emotional weight to the past, even though both the future and past do not exist insofar as we can prove. The only thing we experience is right now. Generally, the moment in which we live is relatively calm. In the moment this sentence is being written, the author is typing. There is nothing stressful about that other than the need to turn this paper in to satisfy the Master's requirement at some future moment. All that is currently happening is typing. Assuming a benign environment, the reader, in the moment he/she is reading this document, is only experiencing reading. There is nothing else to be concerned with at this very moment despite the mortgage that might be due two weeks from now or the possibility of getting cancer someday. Consider again the previously mentioned indirect fire example. The only thing a person need be concerned with is actually getting hit (or

one of his buddies) by an enemy mortar round. If a person has not been hit, then he has nothing to be concerned with (again...unless one of his buddies is hit).

At this point the reader may ask, "Yes, but the person **could** get hit. That's something to worry about isn't it?" The author would agree, if the reader were a well-known prognosticator capable of one-hundred percent accuracy. Short of that, the future is unwritten and anything is possible. Near misses don't matter; explosive noise doesn't matter (unless it blows an eardrum out). The time to worry is when you actually get hit. When this was pointed out and explained to some members of the author's unit during two of the author's last Iraq deployments the resulting calm exhibited by formerly panicked subordinate personnel was significant.

Another useful aspect of mindfulness is metacognitive awareness. This consists of recognizing thoughts as "only" thoughts that have no weight until one, consciously or unconsciously, acts on them in the real world. Thoughts and feelings are experienced and recognized as just mental events instead of being experienced as the self.[22] The usefulness of this concept becomes immediately apparent considering two of the most significant and recurring symptoms of CPTSD are depression and suicidal ideations. If a patient is taught to cultivate mindfulness, then the patient can learn to recognize depressive or suicidal thoughts as something to be observed and released, not something to be acted upon. By practicing metacognitive awareness as developed through regular mindfulness practice, a depressed or suicidal patient can consciously choose what to do next instead of acting mindlessly out of pain or fear.

Mindfulness-Based Cognitive Therapy: Origin

Mindfulness Based Cognitive Therapy or MBCT was created by Dr. Zindel Segal, a cognitive psychologist, in 1993 to help patients prevent relapses of depression. MBCT combines elements of cognitive therapy with a heavy dose of mindfulness-based stress reduction (MBSR). It incorporates cognitive therapy principles into a mindfulness framework. It's now being used as a way for patients suffering from depression and inappropriate anxiety to

develop new ways of treating recurrence of suicidal behavior[23], treatment-resistant depression[24], and non-combat related PTSD[25].

MBSR, a significant part of MBCT, was created by Jon Kabat-Zinn, PhD, in 1979 at the University of Massachusetts Medical School Stress Reduction Clinic. Dr. Kabat-Zinn originally founded the Stress Reduction Clinic to assist with reducing pain-related stress in patients that were undergoing procedures at the hospital. Treatment has been successfully provided for patients as far ranging as those with broken limbs, cancer, and skin conditions such as psoriasis and immune deficiencies. Over 18,000 patients have been helped since the founding of the MBSR Stress Reduction Clinic.

Mindfulness-Based Cognitive Therapy: Explanation and Utility

MBCT was originally designed and used to help patients from suffering depressive relapses. Therefore, understanding how MBCT works requires understanding what causes depression and depressive relapses. The fundamental difference between MBSR and MBCT is that MBCT seeks to understand, identify, and release the mind states that a person is suffering from using mindfulness as an investigative tool whereas MBSR simply uses mindfulness to view whatever happens to come up without target, direction, or judgment.

Different people suffer from depression for different reasons. Something that might depress one person may not impact another. For some, depression may only be caused by significant trauma such as death of a child or significant, permanent physical injury to themselves. Others may suffer clinical depression due to divorce, loss of a job, or unkind words from a local gas station attendant.

In all of these situations a significant predictor of how the person will be depressed is how and what they think about the situation they are presented with. Depression results from the patient having a particular view or model of the world that results in a depressive state. Characteristic of this view are certain feelings or thoughts about the self as being undeserving, inadequate, worthless, or blameworthy as examples. In a depressed patient these thoughts are

not viewed as merely thoughts or ideas but as core beliefs about the self or as coming from the self. Without intervention, these beliefs lead to more depressive thoughts/behavior and could result in suicidal ideations and suicide.

Generally the problem with depression is not the original incident itself, but that the mind has a hard time letting go of the original incident. Instead the mind plays it back again and again, reliving the original depressive circumstance over and over. The key is to find a way to allow the mind to let the depressive thought-cycle die out.

MBCT uses two modes of thought in order to describe how mindfulness can help do this. The "doing" mode and the "being" mode.

The "doing" mode is characterized by the mind's attempt to resolve an inconsistency or discrepancy in how the mind believes things should be versus how things really are. When the mind detects this discrepancy two things occur. The first is negative feelings (thoughts) are generated (frustration, anger, depression, etc). The second is the mind begins to churn (sympathetic arousal) with how to resolve the discrepancy. If the discrepancy can readily be resolved then the mind exits "doing" mode and arousal is extinguished.

An example of this would be trying to buy an ice cream for thirty cents when you only have a quarter. Immediately the mind begins to churn through the discrepancy. You look at the ground for a nickel and then ask the ice cream man if he can just give it to you for twenty-five cents. He says no and you experience frustration. You walk back to your house angry. Another example is a divorce. Your spouse wants a divorce and you don't. The divorce is underway and your mind churns with the discrepancy between you believing you should stay married and that fact that your spouse wants a divorce. The mind attempts to explain how things should have been different in the past or how they could be different in the future to "save" the marriage or it tries to convince you you'll be better off anyway even though you still love your spouse. All of these attempts to resolve the inconsistency are experienced as "real" rather than simply events of the mind. The "doing" mode in this case can lead to significant frustration, sadness, and

potentially depression. The "doing" mode clouds the mind from experiencing the present moment and has trapped it within the cycle of analyzing future and past, trying to resolve the dilemma.

The "being" mode is characterized by not having any discrepancy to solve and not trying to achieve any particular goals. It is accepting and allowing for what is occurring in the present moment. In the case of the previous ice cream example a person, operating in "being" mode, that didn't have enough money would recognize the discrepancy as a feeling of frustration but would acknowledge that perhaps they could get an ice cream later or tomorrow. In the example of divorce the person being told that their spouse wants a divorce would recognize their anger or resentment but only as a mental event, not something to take action on and not something affecting the self. A person in "being" mode would accept the situation for what it is without sending the mind into a cycle of analyzing the future and the past in hopes of making the situation different than it is.

"The core skill that the MBCT program aims to teach is the ability, at times of potential relapse, to recognize and disengage from mind states characterized by self-perpetuating patterns of ruminative, negative thought."[26] Learning this skill obviously has the potential for preventing more than just depressive relapse in personnel that are not yet in a depressive state. Appendices E and F give a good idea of what a standard 8-week MBCT course consists of. There are probably ways the course could be modified to be more palatable for the typical Marine personality that could see techniques such as meditation as less than manly or warrior-like. Mindfulness can be cultivated in more ways than meditation.

Much of what patients experience as COSRS or CPTSD is related to how they think about what happened to them or what might happen again. One can see how large the discrepancy could be that might cause a COSR or CPTSD sufferer to attempt to resolve a discrepancy in why they are alive and their friend is not or why they lost a leg when "they weren't supposed to". The CPTSD suffered by members of Lt. Calley's platoon at My Lai led

several of them to commit suicide. The discrepancy they were trying to resolve, as evidenced by video interviews of some of them, was how they could have killed women and children when they knew it was wrong. In the cases of these men there was no successful intervention and "doing" mode took them to the grave.

While MBCT may not be effective for every single COSR or CPTSD sufferer hopefully it is clear how it could be helpful for some. Another tool in the mental health professional's tool kit. The awareness training alone is a useful way to promote relaxation and complement other forms of therapy a patient may be going through.

MBCT is definitely a possible long term solution for patients that are using medications to treat depression and suicidal feelings but suffering side effects of those medications. It also is a viable alternative to some of the other psychotherapeutic treatments since it minimizes exposure to reimagined trauma and emphasizes self-regulation as the goal reinforcing that it's not really the trauma that injures us; it's our reaction to the trauma.[27]

Left of the Boom: MBCT as a pre-combat inoculation

The utility of MBCT or at least the exposure to mindfulness as part of a pre-deployment training program could go a long way in preparing Marines to deal with long work hours under stressful conditions, long periods away from family, and operating in an unfamiliar country around citizens of another culture. The clarity of thought that can be cultivated through mindful practice would be particularly helpful for an advisor to a foreign military such as Military Transition Team (MiTT) Leader. Many times the author witnessed frustration and anger exhibited by fellow Marine officers when Iraqis weren't doing what the American officers thought they should be doing or performing to an American standard. This frustration can be detected by foreign soldiers and can be counter-productive to training and mentorship. The cultivated ability to accept things for what they are could be a huge help. Awareness training in general would allow Marines to better understand how they mentally operate to begin with so that they can tell

when something is going wrong and seek help before things get beyond their ability to recognize the problem.

The Marine Corps is a significant warrior culture but another significant warrior culture in history has used meditative practices to focus their mind and sharpen their skills as fighting men: The Samurai. Mahayana Buddhism, otherwise known as Zen, was practiced by the Samurai to bring order to their mind and cultivate their awareness. They would spend long hours performing seated meditation (zazen), walking meditation (kinhin), and painting in order to increase the focus of their awareness and free their mind of distractions related to worry of the future or lament of the past. The belief was that practicing moment-to-moment awareness would increase their prowess in battle by reducing or eliminating fear and experiencing a battle as it's actually happening instead of how their mind may want it to turn out. Having an uncluttered mind and not being emotionally attached to an outcome also allowed the Samurai to act more spontaneously in battle and in politics as they moved into leadership positions.

The general philosophy of the Samurai was to always be ready for death. This led them to make the most out of each moment they had since they acknowledged they might not have another moment. This sounds fatalistic but can be liberating when one realizes that no one knows when their death will come. If you are always ready for it then you may potentially live your life with less missed opportunities and regret. Believing there will always be a tomorrow leads many people down the path of waiting to do things in life.

There is evidence that the Marine Corps Martial Arts Program (MCMAP) was originally envisioned as having a more significant element of awareness training as a part of it. On May 15th, 2000, at Camp Pendleton, California Dr. Strozzi-Heckler (a former Marine himself) and a team from the Strozzi Institute began a six week training program for forty-two Marines, at the behest of the Commandant in what was called the Marine Warrior Project, the precursor to the MCMAP. The project goals were to make the Marines "outwardly ready for decisive action and

inwardly peaceful and resolute".[28] The primary idea was that the "strategic corporal" was going to need more tools in his pack to deal with the complexity of contemporary warfare.

The successful end result of the course was a transition of the Marine Warrior Project into the Marine Corps Martial Arts Program albeit with less of an emphasis on the awareness training aspects.

Something like this had done more immersively in 1985. As detailed in his book, *In Search of the Warrior Spirit: Teaching Awareness Disciplines to the Green Berets*, Dr. Strozzi-Heckler was a member of a team that provided "human technologies"[29] training for 25 Green Berets, everyday for six months. The training consisted of dietetic training, awareness meditation, biofeedback, aikido, and mind-body psychology. These technologies were incorporated into every aspect of Green Beret training to include physical training, patrolling, marksmanship training, and various types of insertion methods (parachute, closed circuit diving). In the end the men that participated felt it greatly improved their skills as soldiers especially in terms of how they viewed themselves in relation to the world around them. Their immediate leadership (Captain Thorne and Colonel Flynn) thought it was effective as well. At the end of the project The Trojan Warrior Program was canceled by a new commanding general citing funding issues and it's incompatibility with military life.

Conclusion

The role of mindfulness in the treatment of psychological trauma is noteworthy. Mindfulness cultivation fosters the development of an internal locus of control, it encourages association as opposed to dissociation, and promotes opening up the field of awareness as opposed to restricting it. Depressive patients treated with MBCT report having the experience of self as competent, the experience of the body as effective as opposed to defective, and develop a sense of self that is whole and integrated. The role that MBCT plays in reducing patients' inability to adaptively manage or tolerate intense emotion is an indispensable part of what makes this treatment such an attractive treatment for COSR and CPTSD sufferers, specifically

related to depression and suicidal ideations. When a Marine can be taught to recognize the thought processes that lead to such things as overwhelming anger, sadness, anxiety, risk-taking and addictive behaviors he then gets to make a choice.

As the wars in Iraq and Afghanistan continue we owe our Marines a choice. We owe it to those that have already gone "right of the boom" and for those young Marines that are still "left of the boom". Perhaps that learned sense of awareness could not only ease the Marine's burden in combat but also make his time with family richer. New discoveries are being made about the human mind all the time and discoveries such as MBCT are the fruits of that research. Let's emphasize "wellness over illness" and use MBCT it as an adaptable component of the "holistic, nested, enabling strategy" the MEF commanders call for at the beginning of this paper.

Bibliography

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders.* Fourth Edition-Text Revision. Arlington, VA: American Psychiatric Association, 2000.

Bedford, Stewart. *War and PTSD.* Baltimore, MD: American House Book Publishers, 2002.

Clayton, Nancy, and William Nash. "Medication Management of Combat and Operational Stress Injuries in Active Duty Service Members." In *Combat Stress Injury: Theory, Research, and Management,* by Charles Figley and William Nash, 219-246. New York: Taylor & Francis Group, 2007.

Coleman, Penny. *Flashback: Posttraumatic Stress Disorder, Suicide, And The Lessons of War.* Boston, MA: Beacon Press, 2006.

Daniels, Linda. *Healing Journeys: How Trauma Survivors Learn To Live Again.* Far Hills, NJ: New Horizons Press, 2004.

Ellis, Albert. *Reason and Emotion in Psychotherapy.* New York: Carol Publishing Group, 1991.

Figley, Charles R., and William P. Nash, . *Combat Stress Injury: Theory, Research and Managment.* New York, NY: Taylor & Francis Group, 2007.

Gaskin, Tom, and Aaron Werbel. *Leaders' Guide for Managing Marines in Distress.* February 2005. http://www.usmc-mccs.org/LeadersGuide/Deployments/CombatOpsStress/generalinfo.cfm (accessed December 18, 2007).

Grossman, Dave. *On Combat: The Psychology and Physiology of Deadly Conflict in War and in Peace.* PPCT Research Publications, 2004.

Hayes, Stephen, Victoria Follette, and Marsha Linehan, . *Mindfulness and Acceptance: Expanding the Cognitive-Behavioral Tradition.* New York: Guilford Press, 2004.

Helmus, Todd, and Russell W. Glenn. *Steeling the Mind: Combat Stress Reactions and Their Implications for Urban Warfare.* Arlington, VA: Rand Corporation, 2004.

Kabat-Zinn, Jon. *Coming to Our Senses: Healing Ourselves and the World Through Mindfulness.* New York: Hyperion, 2005.

—. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness.* Fifteenth Anniversary Edition. New York, NY: Bantam Dell, 1990.

Kabat-Zinn, Jon. "Mindfulness-Based Interventions in Context: Past, Present, and Future." *Clinical Psychology* (American Psychological Association), 2003: 144-156.

Kenny, M. A., and J. G. Williams. "Treatment-resistant Depressed Patients Show a Good Response to Mindfulness Based Cognitive Therapy." *Behaviour Research and Therapy*, 2007: 617-625.

King, Winston L. *Zen and the Way of the Sword: Arming the Samurai Psyche.* Oxford: Oxford University Press, 1993.

Matsakis, Aphrodite. *I Can't Get Over It: A Handbook For Trauma Survivors.* Oakland, CA: New Harbinger Publications, Inc., 1992.

Mattis, J. N., K. J. Stalder, and R. C. Zilmer. "Letter to the Commandant: TRI-MEF COMBAT OPERATIONAL STRESS CONFERENCE." *Marine Corps Gazette*, September November 2007: 32.

Merriam-Webster, Inc. *MERRIAM-WEBSTER ONLINE.* 2005. http://www.merriam-webster.com/ (accessed March 2nd, 2008).

Mind and Life Institute. "Investigating the Mind: Mindfulness, Compassion, and the Treatment of Depression." *The Mind & Life Institute and Emory University Present Mind and Life XV.* Atlanta: Mind and Life Institute, October 20, 2007.

Moore, Bret, and Greg Reger. "Historical and Contemporary Perspectives of Combat Stress and the Army Combat Stress Control Team." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 161-182. New York: Taylor & Francis Group, 2007.

Nash, William. "Combat/Operational Stress Adaptations and Injuries." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 33 -64. New York: Tailor & Francis Group, 2007.

Nash, William. "The Stressors of War." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 11-33. New York: Tailor & Francis Group, 2007.

Nash, William, and Dewleen Baker. "Competing and Complementary Models of Combat Stress Injury." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 65 -96. New York: Taylor & Francis Group, 2007.

O'Connor, Francis. "Human Performance Optimization: An Evolving Charge to the Department of Defense." *Military Medicine*, 2007: 1133-1137.

Rhys Davids, Caroline. *Buddhist Manual of Psychological Ethics, of the Fourth Century B.C., Being a Translation, now made for the First Time, from the Original Pāli, of the First Book of the Abhidhamma-Piṭaka, entitled Dhamma-Saṅgaṇi (Compendium of States or Phenomena).* Whitefish, MT: Kessinger Publishing, 1900, 2003.

Rizzo, Albert, Barbara Rothbaum, and Ken Graap. "Virtual Reality Applications for the Treatment of Combat-Related PTSD." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 183-204. New York: Taylor & Francis Group, 2007.

Segal, Zindel V., J. Mark Williams, and John D. Teasdale. *Mindfullness-Based Cognitive Therapy for Depression: A New Approach to Preventing Relapse.* New York, NY: The Guilford Press, 2002.

Segura-Khagram, Regina. *Mindfulness Based Cognitive Therapy (MBCT) for Depression.* Seattle: University of Washington, April 10, 2008.

Shay, Jonathan. *Achilles In Vietnam: Combat Trauma and the Undoing of Character.* New York, NY: Scribner, 1994.

—. *Odysseus In America.* New York, NY: Scribner, 2002.

Spira, James, Jeffrey Pyne, and Brenda Wiederhold. "Experiential Methods and the Treatment of Combat PTSD." In *Combat Stress Injury: Theory, Research, and Management*, by Charles Figley and William Nash, 205-218. New York: Taylor & Francis Group, 2007.

Strozzi-Heckler, Richard. *In Search of the Warrior Spirit: Teaching Awareness Disciplines to the Green Berets.* Expanded Third Edition with Marine Martial Art Update. Berkeley, CA: North Atlantic Books, 2003.

Teasdale, John, Richard Moore, Hazel Hayburst, Marie Pope, Susan Williams, and Zindel Segal. "Metacognitive Awareness and Prevention of Relaps in Depression; Emeprical Evidence." *Journal of Consulting and Clinical Psychology*, 2002: 275-287.

Thorne, Frederick Charles. "Mindfulness-Based Cognitive Therapy for Prevention of Recurrence of Suicidal Behavior." *Journal of Clinical Psychology*, 2006: 201-210.

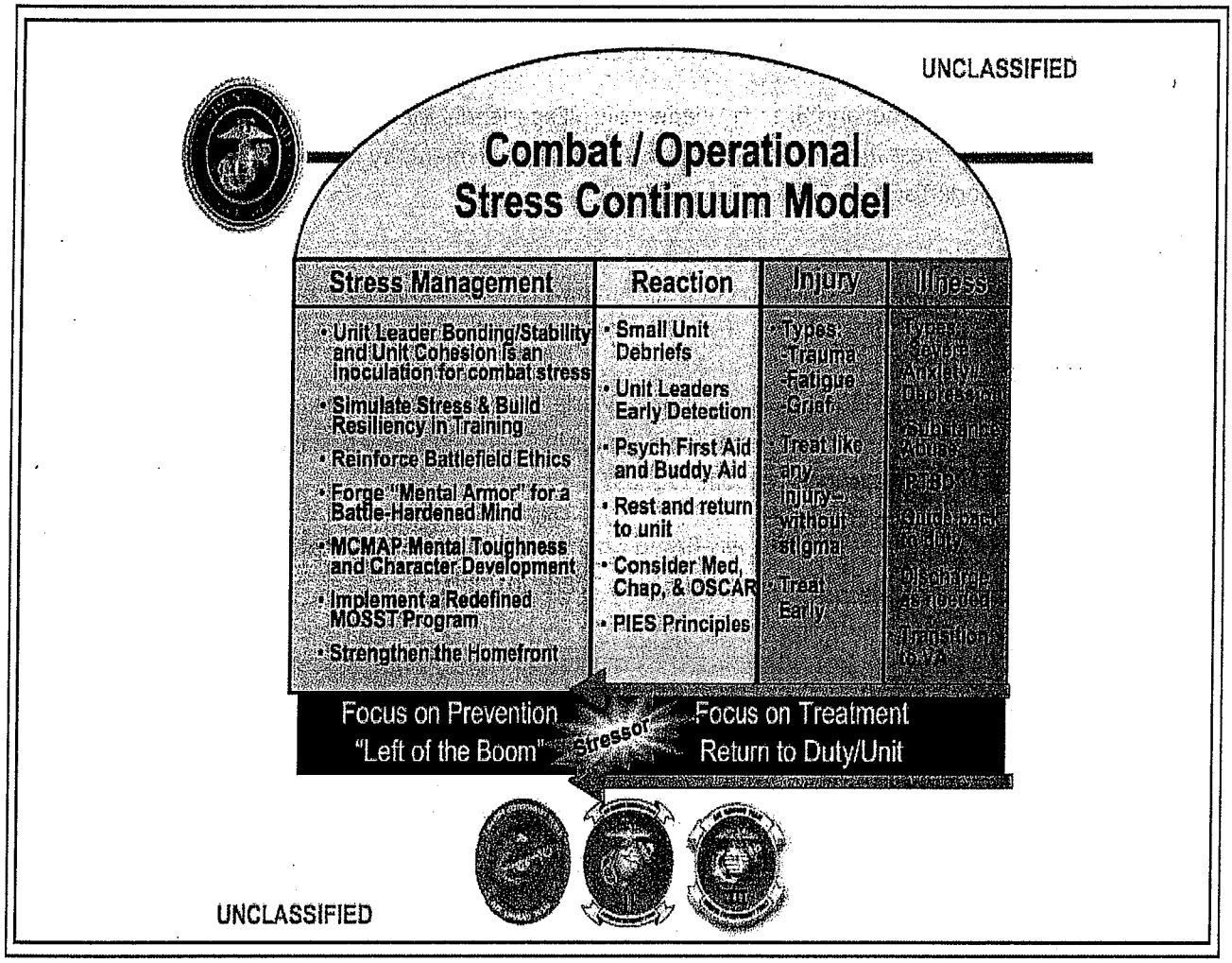
Twiggs, Travis. "PTSD: The War Within." *Marine Corps Gazette*, 2008: 59-61.

Vergara, Tacie. *Understanding and Treating Complex Posttraumatic Stress: Approaching Mindfulness.* PhD Thesis, Philidelphia: Widener University, 2003.

Wilson, Jacob, and Gabriel. Wilson. "Tapering Part I." *Journal of Hyperplasia Research*, January, 2005: http://www.abcbodybuilding.com/taper1.php.

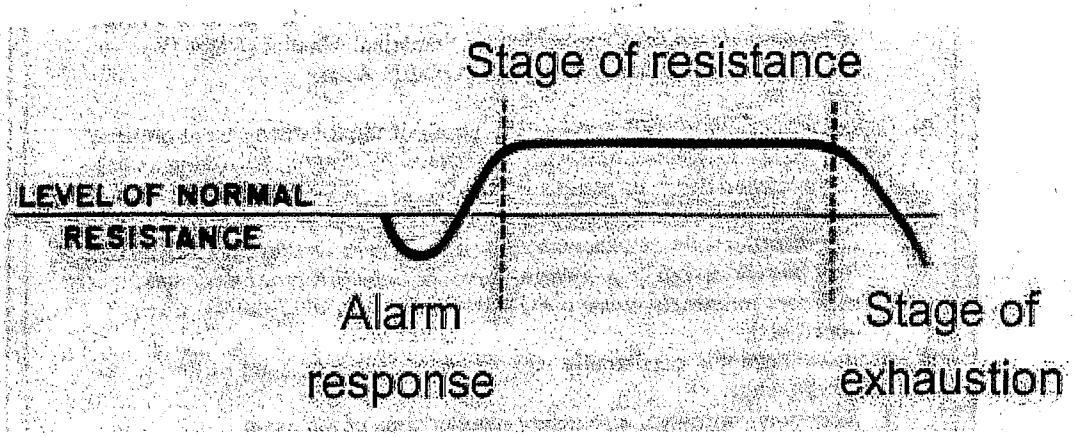
Appendix A

Marine Corps Combat-Operational Stress Continuum Model[30]

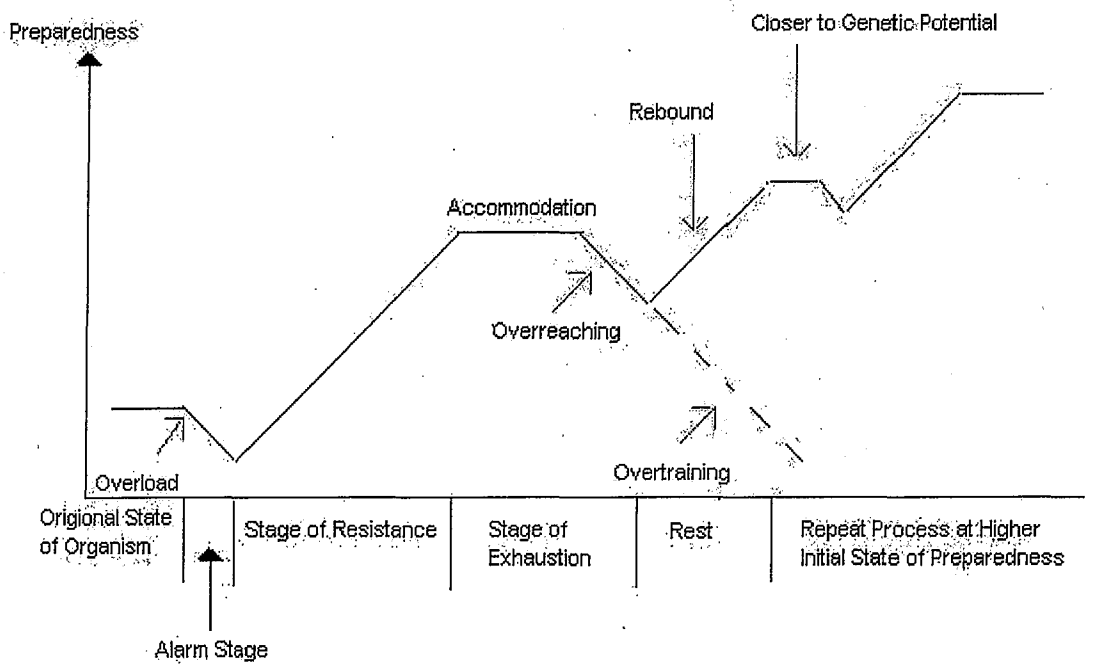


Appendix B

Stress Adaptation Models



Han Selye's General Adaptation Syndrome (GAS) Model



Han Selye's General Adaptation Syndrome (GAS) Model with Strengthening Adaptive Response Through Rest

Appendix C

Diagnostic Criteria for Posttraumatic Stress Disorder[31]

Diagnostic Criteria for Posttraumatic Stress Disorder

(Extracted from the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Assn.)

A. Exposure to a traumatic event in which both of the following were present:
   1. Experienced, witnessed, or was confronted by event(s) involving actual or threatened death or serious injury . . . of self or others
   2. Response involved intense fear, helplessness, or horror
   The disorder may be especially severe or longer lasting when the stressor is of human design (e.g. torture, rape). (DSM-III-R notes that: some stressors frequently cause the disorder (e.g. natural disasters or car accidents).

B. Traumatic event is persistently reexperienced in one or more of the following ways.
   1. Recurrent, intrusive, distressing recollections of the event
   2. Acting or feeling as if the event were recurring including: "sense of reliving" the experience, illusions, hallucinations and flashbacks—including while awakening or intoxicated
   3. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
   4. Psychological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma, or numbing of general responsiveness, as indicated by at least 3 of the following:
   1. Efforts to avoid thoughts, feelings or conversations associated with the trauma
   2. Efforst to avoid activities, places, or people that arouse recollections of the trauma
   3. Inability to recall an important aspect of the trauma
   4. Markedly diminished interest or participation insignificant activities
   5. Feelings of detachment or estrangement from others
   6. Restricted range of affect (e.g. unable to have loving feelings)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated from 2 or more of the following:
   1. Difficulty falling or staying asleep
   2. Irritability or outbursts of anger
   3. Difficulty concentrating
   4. Hypervigilance
   5. Exaggerated startle response

   [Self medication]

E. Duration of the disturbance (symptoms in B, C, and D) of at least one month

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Acute: if duration of symptoms is less than 3 months
Chronic: if duration of symptoms is 3 months or more
With Delayed onset: if symptoms were at least 6 months after the trauma.

Appendix D

Mind and Life Dialogues, 2007

Emory University School of Medicine[32]

Example List of Attendees

- **Tenzin Gyatso, the XIVth Dalai Lama**, Leader of Tibetan Buddhism and head of the Tibetan government-in-exile

-**Dr. Richard Davidson**, current director for the Laboratory of Affective Neuroscience at University of Wisconsin-Madison

-**Dr. Helen Mayberg**, neurologist and professor, Departments of Psychiatry and Behavioral Sciences and Neurology, Emory University School of Medicine

-**Dr. Zindel Segal**, the Head of the Cognitive Behavior Therapy Unit at the Center for Addiction and Mental Health and is a Professor in the Departments of Psychiatry and Psychology at the University of Toronto

-**Dr. Charles B. Nemeroff**, member of the Board of Directors of the American Foundation for Suicide Prevention and President of its Scientific Council

-**Dr. John Dunne**, assistant professor in the Department of Religion at Emory University, where he is Co-Director of the Encyclopedia of Contemplative Practices and the Emory Collaborative for Contemplative Studies

Appendix E[33]

Standard 8-week MBCT Course Objectives, Goals and Outline

Objectives

1. Increase self-awareness during interactions with colleagues, friends and family.
2. Increase mental concentration
3. Enhanced wellness and job satisfaction.
4. Increase understanding of mind-body interaction and the affect of stress.
5. Reduce Stress

At the conclusion of the activity, participants should be able to:

1. List and describe various aspects of mind-body medicine.
2. Describe the physiological and psychological basis of stress reactivity.
3. Understand how mindfulness and Qigong practice can reduce the negative effects of stress.
4. Practice mindfulness and Qigong in a variety of settings.
5. Apply self-awareness during difficult communication situations.
6. Compare and contrast passive, passive/aggressive, aggressive, and mindful communication styles.

Course Outline

The program consists of in-class education activities including:

1. a ½ hour one-to-one interview with the instructor prior to 1st class;
2. two 2.5 hour sessions (week #s 1 and 8);
3. six 2 hour sessions (week #s 2 - 7);
4. an all day retreat (7 hours).

Also, 20 - 40 minutes of homework each day is required.

Each of the evening sessions will follow a general outline to include:

- Welcome and Overview
- Self-awareness exercise
- Group Discussion
- Break
- Experiential Mindfulness Exercise

Appendix F[34]

8-week MBCT Description by session

One-to-one interview with instructor (1/2 hour)

Session 1: Introduction to MBSR. Begin to establish group rapport; introduce MBSR and guidelines for participation; allow time for personal introductions, i.e., each person's expectations for the program, positive things about themselves; perform guided body scan; discuss 'homework'; and close with meditation. (2.5 hours)

Session 2: Perception and appraisal. Group discussion of homework experiences; perform guided body scan; discuss the concept of appraisal, and mental factors in the appraisal of stress; meditation; and announce homework. (2 hours)

Session 3: Being Present. Perform mindful Qigong; discuss progress, homework experiences, mindful movement, mindfulness in daily life, etc.; close with meditation. Session focuses on practicing mindfulness in everyday life, and strategies for the transfer of such skills in real-life stressful situations. (2 hours)

Session 4: Commitment. Open with meditation and focus on breath, body sensations, and sound; discuss homework experience and mindfulness in daily life; perform mindful movement; discuss stress and how to deal with the shadow side of stress, pain, and darkness; discuss stress reactivity versus responding consciously; and close with meditation. This session focuses on the theme of mindfulness practice as a means of reducing the negative effects of stress reactivity as well as the development of more effective ways of responding positively and pro-actively to stressful situations and experiences. The physiological and psychological bases of stress reactivity are reviewed and discussion is directed toward the use of mindfulness as a way of eliminating or reducing the negative effects of stress reactivity. (2 hours)

Session 5: Responding to Stress. Perform guided meditation with focus on letting go of self-judgments, expectations, analyses, etc.; review fundamentals of mindfulness practice; meditate with focus of observing thoughts as mental events; discuss observations of reacting to stressful events during the week; and close with meditation. This session emphasizes the capacity of the participant to adapt more rapidly and effectively to everyday challenges and stressors. (2 hours)

Session 6: Communication. Open with meditation; discuss homework experience and meditation experiences outside of classes; discuss upcoming all-day retreat; discuss difficult communications and passive, aggressive, and assertive patterns; discuss expressing feelings effectively and barriers to doing so; perform Qigong exercises; and close class with meditation. (2 hours)

All Day Retreat: A Day of Mindfulness. This will include: awareness of breathing meditation; Qigong exercises; walking meditation, and standing and sitting meditations.

Session 7: Feeling at Home Wherever We Are. Open with meditation; ask participants to change seats in the room several times and look at the room from different perspectives - discuss subconscious activity that influences our choices; discuss all-day retreat, e.g., reactions and responses, likes and dislikes, feelings afterwards, what participants learned about themselves; perform walking meditation; discuss mindfulness; and close with meditation. (2 hours)

Session 8: Keeping up the Momentum. Open with meditation and body scan; discuss progress thus far and allow each participant to discuss benefits he/she has derived from the program, what each person has learned about him- or herself; obstacles to growth and healing, etc.; and review entire course. (2.5 hours)

Citations and Endnotes

[1] (Mattis, Stalder and Zilmer November 2007)
[2] (Moore and Reger 2007, 166)
[3] (Segal, Williams and Teasdale 2002, 63)
[4] (Nash 2007, 38-44)
[5] (Grossman 2004, 273)
[6] (Spira, Pyne and Wiederhold 2007, 208)
[7] (Helmus and Glenn 2004, 129)
[8] (Clayton and Nash 2007, 222-226)
[9] (Clayton and Nash 2007, 234)
[10] (Clayton and Nash 2007, 228-231)
[11] (Clayton and Nash 2007, 232)
[12] (Clayton and Nash 2007, 236)
[13] (Spira, Pyne and Wiederhold 2007, 209-216)
[14] (Rizzo, Rothbaum and Graap 2007, 183-204)
[15] (Spira, Pyne and Wiederhold 2007, 211)
[16] (Kenny and Williams 2007)
[17] (Thorne 2006)
[18] (Ellis 1991, 35)
[19] (Rhys Davids 1900, 2003, pp. xvi-xvii)
[20] (Mind and Life Institute 2007, 1)
[21] (Vergara 2003, 276)
[22] (Teasdale, et al. 2002, 275)
[23] (Thorne 2006)
[24] (Kenny and Williams 2007)
[25] (Vergara 2003)
[26] (Segal, Williams and Teasdale 2002, 75)
[27] (Vergara 2003, 272)
[28] (Strozzi-Heckler 2003, 354)
[29] (Strozzi-Heckler 2003, 2)
[30] (Mattis, Stalder and Zilmer November 2007)
[31] (Grossman 2004, 273)
[32] (Mind and Life Institute 2007, 9-12)
[33] (Segura-Khagram 2008)
[34] (Segura-Khagram 2008)